5: Castetter & Bell N-5 (1938-1940 1942
NU28 Papago NU28
Pima NU29

this spirit of giving. But not only was the Papago practice of giving motivated by economic considerations; generosity was a high virtue and giving was truly an investment in good will. One who secured a reputation for penury definitely lost caste in village and family life. Moreover, all gifts were returned in equal quantity and more. Such continuous exchange of goods in the form of gifts constituted the Papago equivalent for trade but only rarely attained the status of actual trade.

In addition to the extensive system of exchange of goods among themselves, some Papago made trading expeditions to the Yuma. They also journeyed to the middle Gila, the San Pedro and the Indians in the Altar Valley, then later among the Mexicans of various parts of Sonóra. This was done particularly at harvest time, Papago from the northern villages traveling to the Gila where they had relatives and friends, those from the southern settlements being in closer contact with Mexico, particularly the Altar Valley. At these places they traded numerous articles and labored in return for food, in historic times chiefly wheat, but formerly maize and beans, as well as cotton. This was observed in 1740, later by Anza;[38] again in 1863-64, and in 1893 by Whittemore,[39] who also noted that when the Papago became very hungry they would journey to the Gila and present for the Pima a "Begging Dance" which had a specific form and lasted two or three nights, in return for which each Pima family was expected to contribute fifty to one hundred pounds of wheat.

In Mexico a few Papago worked as cowboys and at miscellaneous tasks, for which they were paid in money. Such contacts resulted in a more rapid deculturation and disorganization than occurred in the northern villages. Specifically these villages in the south, some of which had raised cattle since Kino's day, began about a century ago to acquire cattle in larger numbers. As a result of hire for money among the

[38] *Documentos*, 3rd ser., IV, 838; Bolton, *Anza*, II, 17.

[39] *Report of the Commissioner of Indian Affairs* for 1863, p. 384; *ibid.* for 1864, p. 153; Whittemore, in *Among the Pimas*, pp. 81-3.

5: Castetter & Bell N-5 (1938-1940) 1942
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rest of the year it has been a shallow, uncertain stream me- 312
andering between high banks, or at times completely dry.

The deepening of the river channel and consequent lowering of the water table, with its decrease of available water for irrigation, beginning about 1890, gradually became worse, and, in 1908, agitation was begun to alleviate the situation. In the fall of 1912 the channel of the Santa Cruz was completely choked with sand, and a temporary pumping plant was installed two and one-half miles above the Agency to supply land on the east side of the river. The only available water other than that developed at the pumping plant was a flow from the east channel of the river, making a total sufficient to irrigate 750 acres.

During the heavy floods of 1914 and 1915 the erosion of reservation land by flood water of the Santa Cruz became so pronounced that immediate action was necessary to preserve the Indian fields. Therefore, in 1915, a long levee was thrown up, a number of wells drilled and pumping stations installed to supply the necessary water for irrigation. In 1916 the largest crop ever grown on the reservation up to that time was harvested.

As to Papago living on the Maricopa Indian Reservation just south of Maricopa, Arizona, little can be said. J. J. Grenville, Superintendent of Irrigation, in his report of April 20, 1911, makes mention of about one hundred Papagos [731] near Maricopa who were on the verge of starvation owing to two successive dry seasons, when their crops were a total failure, although they had under irrigation one hundred acres at the time of his report.

At Akchin, about three miles southwest of Maricopa, is a settlement of approximately 120 Indians who came there about 1874 from Maricopa Wells, eight miles northwest of Maricopa; their fields at Maricopa Wells had been irrigated by flood waters of the Santa Cruz, and were so impregnated with salts as to be unproductive. At the new location they supplied about 180 acres with flood water from the Akchin

cattle were held in her two districts, and that the total cattle population on the reservation was about 25,000. 175 233 [311]

It is reasonable to assume from this and other evidence that the period of heavy grazing on the reservation was between 1914 and 1937. Drought conditions in the middle 1930's caused many cattle and horses to die on the range and forced Indian owners to sell more than usual numbers. Cattle and horse sales, in fact, more than doubled between 1935 and 1939. It was also during this time that the first serious attempts were made by the Bureau of Indian Affairs to introduce better range management practices and to influence the Indians to run fewer head of cattle of better quality. Pressure to reduce the number of horses, especially horses running wild on the reservation, also had an effect and, in addition, the number of horses was reduced because of a dourine infection which was not brought under control until the late 1940's. [731] 175 233 657 433

The steady reduction in stock numbers was revealed in a ten-year comparison for the period 1949 to 1959 (Metzler, 1960, p. 55). The data also provides information on the size of the Papago ranges and the number of acres available per animal unit. See Table 12. 175 233